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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,654	06/27/2001	Takashi Maruko	Q65201	5513
7590	05/19/2004		EXAMINER	
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3213			DUONG, THANH P	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/891,654	MARUKO ET AL.
	Examiner	Art Unit
	Tom P Duong	1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 17 February 2004.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-4 and 6-10 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-4 and 6-10 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4)  Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5)  Notice of Informal Patent Application (PTO-152)  
 6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 6-8, and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sullivan et al. (5,803,831).  
Regarding claims 1-3, 6-8, and 10, Sullivan discloses a multi-layer golf ball comprising of a solid core (10), an inner cover layer (14) formed of ionomer resins, constitutes an intermediate layer, with thickness G1 of 0.01-0.1 inch (0.254 - 2.54 mm), (Col. 6, lines 57-60) and Shore D hardness of 60 or more (Col. 6, lines 65-67), and an outer cover layer (16) with thickness G2 of 0.01-0.1 inch (0.254 - 2.54 mm), (Col. 15, lines 30-34) and Shore D hardness of 55 or less, preferably 50 or less (Col. 15, lines 37-39) and is formed of an urethane resin (Col. 15, lines 15-23). Sullivan does not disclose the optimized formula:  $[G_1/(G_1 + G_2)] \times 100 \Rightarrow 45\%$ ; however, selecting a given G1 value of 2.0 mm and G2 value of 0.5 mm from the above range and substituting these values into the above formula will yield 80%, which is greater than or equal to 45%. Thus, it would have been obvious in view of Sullivan to select the appropriate G1 value and G2 value in the above range to satisfy the claimed formula. Regarding claim 3, Sullivan does not disclose expressly the deflection or deformation of 3.0-4.5 mm under an

applied load of 100Kg. Sullivan discloses the core material (Col. 4, lines 55-62) is made of the same material as the core material of the claimed invention, and therefore, the core material properties of Sullivan are the same as the core material properties of the claimed invention. Thus, the solid core of Sullivan inherently undergoes the same deflection values of 3.0-4.5 mm under an applied load of 100 Kg.

2. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Sullivan et al. '831. Sullivan discloses a urethane cover (Col. 15, lines 15-23) of the claimed invention but fails to disclose expressly the melt index of at least 3.0 dg/min at 190° C. Note, the melt index is a process parameter that used to control the viscosity of the polymer material during the molding process in order to provide proper molding of the ball cover. Product-by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps (See MPEP 2113).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Sullivan et al. '831 in view of Shimosaka et al. (5,816,937). Sullivan fails to disclose an intermediate layer with a Shore D hardness of 56-58. Shimosaka teaches a multi-layer golf ball comprising an intermediate layer with Shore D hardness not less than 55

degrees and outermost layer with Shore D hardness of less than 55 (Col. 1, lines 55-65). The harder cover intermediate layer plays the role of gaining an initial velocity enough to increase the flight distance while the softer outermost layer provide for a better feeling upon ball impact. Thus, it would have been obvious in view of Shimosaka to one having ordinary skill in the art to fabricate the intermediate layer of Sullivan with the Shore D hardness range as taught by Shimosaka in order to improve flight distance.

***Response to Arguments***

Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong  
May 4, 2004

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Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700